

52288**3** 

International # PCT/EP 03/08701

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C12N15/24 C07K14/54 A61K38/20 C07K16/24 C12N15/62 According to International Patent Classification (IPC) or to both national classification and IPC B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC 7 C12N Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, SEQUENCE SEARCH, BIOSIS, EMBASE C. DOCUMENTS CONSIDERED TO BE RELEVANT Relevant to claim No. Category 5 Citation of document, with indication, where appropriate, of the relevant passages 1-55 EP 0 314 415 A (IMMUNEX CORP) X 3 May 1989 (1989-05-03) cited in the application figures 4,5; examples 3,7 1 - 55WO 00 17362 A (SCHERING CORP) X 30 March 2000 (2000-03-30) \* SEQ ID NO:7 \* 1-55 WO 96 04306 A (SCHERING CORP) X 15 February 1996 (1996-02-15) \* SEQ ID NO:7 \* 1-55 WO 99 03887 A (BOLDER BIOTECHNOLOGY INC; X COX GEORGE N III (US)) 28 January 1999 (1999-01-28) \* SEQ ID NO:14 \* page 51; example 13 -/--Patent family members are listed in annex. Further documents are listed in the continuation of box C. Special categories of cited documents: "T" later document published after the international filing date or priority date and not in conflict with the application but died to understand the principle or theory underlying the "A" document defining the general state of the art which is not considered to be of particular relevance invention "E" earlier document but published on or after the international "X" document of particular relevance; the claimed Invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone filing date "L" document which may throw doubts on priority claim(s) or which is clied to establish the publication date of another citation or other special reason (as specified) document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such docu-\*O\* document referring to an oral disclosure, use, exhibition or ments, such combination being obvious to a person skilled document published prior to the international filing date but later than the priority date claimed "&" document member of the same patent family Date of the actual completion of the international search Date of mailing of the international search report 26 January 2004 03/02/2004 Name and mailing address of the ISA Authorized officer European Patent Office, P.B. 5818 Patentiaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016

Sirim, P



International A Pation No
PCT/EP 03/08701

		PCT/EP 03/08701				
C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT						
Category °	Citation of document, with Indication, where appropriate, of the relevant passages	Relevant to claim No.				
Х	US 5 459 058 A (LEDER PHILIP ET AL) 17 October 1995 (1995-10-17) the whole document	1-55				
X	WO 01 75140 A (UNIV CONNECTICUT) 11 October 2001 (2001-10-11) examples 7,8	1-55				
X	SRINIVASAN S ET AL: "A model of IL-7 and extra-cellular domains of its receptor complex using distance geometry and structure-function data." PROTEIN ENGINEERING, vol. 6, no. SUPPL., 1993, page 107 XP009003649 Winter Symposium on Advances in Gene Technology: Protein Engineering and Beyond; Miami, Florida, USA; 1993 ISSN: 0269-2139 cited in the application the whole document	1-55				
X	KROEMER ROMANO T ET AL: "Prediction of the three-dimensional structure of human interleukin-7 by homology modeling." PROTEIN ENGINEERING, vol. 9, no. 6, 1996, pages 493-498, XP009003787 ISSN: 0269-2139 cited in the application page 494 -page 497; figure 3	1~55				
X	GOODWIN RG ET AL: "Human interleukin 7: molecular cloning and *growth* factor activity on human and murine B-lineage cells" PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF USA, XP002077974 ISSN: 0027-8424 cited in the application the whole document	1-55				



International A cation No
PCT/EP 03/08701

		101, 21 00, 00, 02			
C.(Continu	ation) DOCUMENTS CONSIDERED TO BE RELEVANT	Relevant to claim No.   1-55   1-55			
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.			
X	COSENZA LARRY ET AL: "Disulfide bond assignment in human interleukin-7 by matrix-assisted laser desorption/ionization mass spectroscopy and site-directed cysteine to serine mutational analysis."  JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 272, no. 52, 26 December 1997 (1997-12-26), pages 32995-33000, XP002226701  ISSN: 0021-9258 cited in the application the whole document	1-55			
X	COSENZA LARRY ET AL: "Comparative model building of interleukin-7 using interleukin-4 as a template: A structural hypothesis that displays atypical surface chemistry in helix D important for receptor activation." PROTEIN SCIENCE, vol. 9, no. 5, May 2000 (2000-05), pages 916-926, XP009003681 ISSN: 0961-8368 cited in the application the whole document	1-55			



International Cation No PCT/EP 03/08701

Patent document lited in search report		Publication date		Patent family member(s)	Publication date
EP 0314415	A	03-05-1989	AT	109829 T	15-08-1994
LI 0014410		00 00 25 55	AU	616456 B2	31-10-1991
			AU	2827289 A	23-05-1989
			CA	1340491 C	13-04-1999
			DE	3851035 D1	15-09-1994
			DE	3851035 T2	01-12-1994
			DK	302089 A	19-06-1989
			EP	0314415 A2	03-05-1989
			FΙ	103987 B1	29-10-1999
			IE	64159 B1	12-07-1995
			IL	88151 A	31-01-1993
			JP	2749838 B2	13-05-1998
•			JP	5268971 A	19-10-1993
			NO	892630 A	23-06-1989
	•		NZ	226679 A	25-06-1991 05-05-1989
			MO	8903884 A1	03-02-1998
			US	5714585 A	23-10-1990
			US	4965195 A	05-12-2000
			US	6156301 A	05-12-2000
			US US	5705149 A 5965122 A	12-10-1999
			US	5328988 A	12-10-1994
			ZA	8807773 A	26-07-1989
 WO 0017362	———— А	30-03-2000	AU	6246199 A	10-04-2000
WO 001/302	,,	00 00 2000	CA	2343979 A1	30-03-2000
			EP	1115867 A1	18-07-2001
			JP	2002526079 T	20-08-2002
			WO	0017362 A1	30-03-2000
			US	2003099947 A1	29-05-2003
WO 9604306	A	15-02-1996	US	5696234 A	09-12-1997
			AU	3196195 A	04-03-1996
			WO	9604306 A2	15-02-1996 
WO 9903887	A	28-01-1999	AU	751898 B2	29-08-2002
			AU	8300098 A	10-02 <b>-</b> 1999 18-12-2001
			BR	9812267 A	11-10-2000
			CN	1269805 T	28-06-2000
			EP	1012184 A1 2001510033 T	31-07-2001
			JP NZ	502375 A	30-11-2001
			NZ	9903887 A1	28-01-1999
			WO US	2003171284 A1	11-09-2003
			US	2003171284 A1 2003162949 A1	28-08-2003
			US	2003162949 A1 2003166865 A1	04-09-2003
			US	6608183 B1	19-08-2003
US 5459058	Α	17-10-1995	US	5759856 A	02-06-1998
WO 0175140	Α	11-10-2001	CA	2404479 A1	11-10-2001
			WO	0175140 A1	11-10-200
			US	2002058791 A1	16-05-2002